

1 What is claimed is:

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3 1. A filter for a washing machine, comprising:
4 a cap fitted to a filter case having an opening via which water passes;
5 a shaft extending from a bottom of the cap; and
6 an extension extending from an end of the shaft, the extension disposed to confront
7 the opening to filter particles included in the water, the extension having a protrusion
8 protruding from one side opposite to the cap.

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10 2. The filter as claimed in claim 1, wherein a circumferential cross-section of
11 the protrusion is a closed curve.

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13 3. The filter as claimed in claim 1, wherein the protrusion has a ring type
14 circumferential cross-section.

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16 4. The filter as claimed in claim 1, wherein the extension has a funnel figure.

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18 5. The filter as claimed in claim 1, wherein a diameter of an end portion of the
19 extension is equal to or greater than a diameter of the opening.

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21 6. A filter assembly for a washing machine, comprising:
22 a filter case comprising:
23 inlet and outlet on a circumference; and
24 an opening inside to make the inlet and outlet communicate with

25 each other; and

26 a filter loaded in the filter case, the filter comprising:

27 a cap fitted to the filter case;

28 a shaft extending from a bottom of the cap; and

29 an extension extending from an end of the shaft, the extension
30 disposed to confront the opening to filter particles in water, the extension
31 having a protrusion protruding from one side opposite to the cap.

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33 7. The filter assembly as claimed in claim 6, wherein a circumferential cross-
34 section of the protrusion is a closed curve.

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36 8. The filter assembly as claimed in claim 6, wherein the protrusion has a ring
37 type circumferential cross-section.

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39 9. The filter assembly as claimed in claim 6, wherein the extension has a funnel
40 figure.

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42 10. The filter assembly as claimed in claim 6, wherein a diameter of an end
43 portion of the extension is equal to or greater than a diameter of the opening.

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45 11. The filter assembly as claimed in claim 6, wherein the filter case is
46 cylindrical.

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48 12. The filter assembly as claimed in claim 6, wherein the inlet is provided to the

circumference of the filter case in a tangential direction.

13. The filter assembly of claim 6, wherein the filter case comprises:

a tube having the inlet and outlet on the circumference;

a partition wall provided in the tube to partition an internal space of the tube into first and second chambers communicating with the inlet and outlet, respectively; and the opening perforating the partition wall.

14. A washing machine comprising:

a cabinet;

a tub provided in the cabinet;

a drum rotatably installed in the tub;

a filter assembly provided in the cabinet to filter water discharged from the tub, the filter assembly comprising:

a filter case comprising:

inlet and outlet on a circumference; and

an opening inside to make the inlet and outlet communicate

with each other; and

a filter loaded in the filter case, the filter comprising:

a cap fitted to the filter case;

a shaft extending from a bottom of the cap; and

an extension extending from an end of the shaft, the extension disposed to confront the opening to filter particles in the water, the extension having a protrusion protruding from one side

opposite to the cap.

15. The washing machine as claimed in claim 14, wherein a circumferential cross-section of the protrusion is a closed curve.

16. The washing machine as claimed in claim 14, wherein the protrusion has a ring type circumferential cross-section.

17. The washing machine as claimed in claim 14, wherein the extension has a funnel figure.

18. The washing machine as claimed in claim 14, wherein a diameter of an end portion of the extension is equal to or greater than a diameter of the opening.

19. The washing machine as claimed in claim 14, wherein the filter case is cylindrical.

20. The washing machine as claimed in claim 19, wherein the inlet is provided to the circumference of the filter case in a tangential direction.

21. The washing machine of claim 14, wherein the filter case comprises:
a tube having the inlet and outlet on the circumference;
a partition wall provided in the tube to partition an internal space of the tube into first and second chambers communicating with the inlet and outlet, respectively; and

97 the opening perforating the partition wall.